

Investigating the pollution of the atmosphere by motor transport

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© 2016 Authors. Environmental pollution is one of the most serious global problems of mankind. Its impact on the public health becomes more acute every year. Ecotoxics - harmful chemicals that pollute the environment - pose a great danger to humans and animals. Their sources are not only production and energy enterprises, but also motor transport. With the increase in the car fleet, the level of harmful impact on the environment is intensively increasing. For example, if at the beginning of the 1970s, hygienists determined the proportion of pollutants introduced into the atmosphere by road transport on average at 13%, now this level has reached 50% and continues to grow. This paper is devoted to the study of the extent of atmospheric pollution by road transport. Literature sources on this problem have been analyzed and summarized, specific types of pollutants released by the exploited vehicles and the results of their harmful effects on the environment and living organisms have been described. The authors of the paper obtained quantitative data on the average daily and average annual volumes of pollutants emitted into the atmosphere during the operation of vehicles in the city of Kazan.

Keywords

Ecology, Environment, Exhaust gases, Motor transport, Pollution

References

- [1] Krzyzanowski M. Health Effects of Transport-Related Air Pollution: Summary for Policy-Makers/M. Krzyzanowski.-Copenhagen: World Health Organization, Regional Office for Europe, 2005.-12 p.-URL: http://www.euro.who.int/__data/assets/pdf_file/0007/74716/e86650_sum.pdf?ua=1
- [2] Stepanova N.V. Impact assessment and risk of pollution of atmospheric air by motor transport emissions to human health /N.V. Stepanova, N.V. Sviatova, I.Kh. Sabirova, A.V. Kosov // Fundamental research.-2014.-No. 10-6.-p. 1185-1190
- [3] Sozinova T.V. Methods for reducing the environmental impact of vehicles /T.V. Sozinova, E.V. Nosova, T.N. Shishelova, A.V. Nosov // Fundamental research.-2005.-No.1.-p. 56-57
- [4] https://studwood.ru/1177887/ekologiya/zagryaznenie_atmosfery_av_totransportom
- [5] Lykova A. S. Zagryaznenie vozduha gorodskih ulits okisiyu ugleroda i ee vrednoe vliyanie. Kand. diss. [Air pollution of city streets carbon monoxide and its adverse effect. Cand. Diss.]. Leningrad, 1953, 16 p
- [6] Gukhman G. Impact of a transport complex on environment. Energiya [Energy], 1999, 1 1, pp. 42-45. [in Russian]
- [7] Ewing R., Walters J. Measuring the benefits of compact development on vehicle miles and climate change. Environmental Practice. 2009, 11 (3), pp. 196-208

- [8] <http://ustroistvo-avtomobilya.ru/sistemy-snizheniyatoksichnosti/> zagryaznenie-avtotransporto-
-okruzhayushhej-sredy/
- [9] Aksenov I.Ia., Aksenov V.I. Transport and environmental protection.-M.: Transport, 1986.-p. 176
- [10] <http://urban.plandex.ru/avtotransport-kak-osnovnoj-istochnikzagryaznenij>
- [11] Morozov K.A. Toxicity of automobile engines:-M.: Legion-Avtodata, 2001.-p. 80
- [12] Litvinova N.A. Motor transport and the ecology of the urban air environment: monograph / N.A. Litvinova.-
Tyumen: RIO FGBOU HPE "TyumGASU", 2016.-p. 170
- [13] <http://doc.mpedagog.ru/zagryaznenie-avtotransportomokruzhayushej-sredi.html>